

REMARKS

Claims 1-19 are currently pending in the present application, with Claims XXX being amended. Reconsideration and reexamination of the claims are respectfully requested.

The Examiner rejected Claims 17 and 18 under 35 U.S.C. 101 in view of the claimed invention being directed to a non-statutory subject matter. Applicant has amended Claims 17 to 18 to more properly claim the subject matter of the invention, and respectfully submits that the amended claims comply with 35 U.S.C. 101.

The Examiner rejected Claims 1, 2, 4, 8, 9, 11, 15, and 16 under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (U.S. patent no. 5,367,514) in view of Sasa et al. (U.S. patent no. 7,061,847). This rejection is respectfully traversed in view of the amended claims.

The present invention is directed to an apparatus, method, and program for recording information on an optical disk by forming pits on the recording surface of a given disk. An important advantage of the present invention is to facilitate the recording of acceptable pits on an optical disk in both low and high recording speeds, by selectively using different kinds of pre-stored pattern tables, each of which contain multi-pulse patterns that correspond to a plurality of lengths of the pit, wherein the multi-pulse pattern are representative of a sequence of multiple pulses of laser lights achieved by intermittently turning on and off the laser light used to form the pits. With respect to the inventions claims in Claims 1, 15, and 17, the pattern tables are selected in accordance with the recording speed and/or the type of the disk used; with respect to the inventions claims in Claims 8, 16, and 17, the pattern tables are selected in accordance with one or both of the recording speed and type of the disk, and also based on the varying linear velocity of the optical disk.

Kobayashi, which is directed to recording data to an optical disk using laser of different energy pulse, does not contain and disclosure or suggestion of storing multiple pattern tables that contain multi-pulse patterns. Rather, pattern memory 49 (as pointed out by the Examiner), is simply described as containing “patterns.” (see col. 17, lines 25-38). There is simply no teaching or suggestion exactly what such stored patterns comprise.

Sasa fails to make up for this deficiency. Specifically, Sasa teaches varying discrete write powers while applying a recording pulse pattern in order to accommodate the linearly varying recording velocity that occurs while data is recorded to an optical disk. Sasa does not disclose or teach storing different types of selectable pattern table, each pattern table having a set of multi-pulse pattern that correspond to a plurality of lengths of pit.

Furthermore, as the Examiner acknowledged at page 4 of the Detailed Action, Kobayashi does not contain any teachings or suggestions of selecting a pre-stored pattern table based on the recording speed and/or disk type. However, Applicant respectfully disagree that Sasa makes up for such deficiency. Specifically, while Sasa discloses allocating write powers to recording pulse patterns and linearly varying the write powers according to the linearly varying recording velocity of a disk, there is simply no mention of selecting a pre-stored table pattern in accordance with a recording speed and/or type of disk. Col. 4, lines 39-56 of Sasa, as pointed out by the Examiner, shows no such disclosure. Applicants note that the changing linear recording velocity is not the same as recording speed of an optical disk, as the Examiner seems to suggest that the linearly varying velocity is the same as the specified recording speed of a disk/recording process.

Finally, Applicant respectfully traverse the Examiner’s combination of Kobayashi and Sasa. Although the two references are both directed to optical disk recording, Kobayashi is directed to

employing laser beams with differently energized pulse portions (see, e.g., Figs. 1 and 3-8), while Sasa is directed to varying the write power (see, e.g., Figs. 2-8). The Examiner does not point to any motivation, either explicitly provided on the references or from common knowledge of one skilled in the art at the time of the present invention, the prior art as a whole, or the nature of the problem itself (as provided in the Background section of the present application). Accordingly, Applicant respectfully submit that the Examiner has not satisfied his burden of showing the motivation to combine the references.

In view of the above, Applicants respectfully submits that Claims 1, 2, 4, 8, 9, 11, 15, and 16 are not obvious in view of Kobayashi and Sasa.

The Examiner rejected Claims 6, 7, 13, and 14 under 35 U.S.C. 103(a) as being unpatentable in view of Kobayashi in view of Sasa, and further in view of Hara (U.S. patent no. 6,044,055). This rejection is respectfully traversed in view of the amended claims.

Applicant notes that Claims 6, 7, 13, and 14 are dependent upon Claims 8.

As discussed above, neither Kobayashi nor Sasa contain any disclosure or suggestion of storing table patterns as recited, or selecting a table pattern in accordance with recording speed and/or type of disk. Hara fails to make up for these deficiencies. Specifically, Hara is directed to high-density optical disk recording by changing the pulse widths of the front and rear end pulses and by varying the positions of the rising and falling edges of the pulses. Hara does not contain any disclosure or suggestion of storing or selecting pattern tables. Accordingly, Applicant respectfully submits that Claims 6, 7, 13, and 14 are not obvious in view of the cited references.

The Examiner rejected Claims 3, 5, 10, and 12 under 35 U.S.C. 103(a) as being unpatentable over Kobayashi in view of Sasa and further in view of Narumi et al. (U.S. patent application

publication no. 2004/0052176). This rejection is respectfully traversed in view of the amended claims.

Claims 3 and 5 are dependent upon Claim 1, while Claims 10 and 12 are dependent upon Claim 8. Again, as discussed above, neither Kobayashi nor Sasa contain any disclosure or suggestion of storing table patterns as recited, or selecting a table pattern in accordance with recording speed and/or type of disk.

Narumi fails to make up for these deficiencies. Specifically, Narumi is directed to a method of recording data to an optical disk by, inter alia, pre-formatting the parameters of a recording pattern. There is no mention or suggestion, in Narumi, of pre-storing table patterns or selecting table patterns in accordance with recording speed or disk type. Accordingly, Applicant respectfully submits that Claims 3, 5, 10, and 12 are not obvious in view of the cited references.

New Claims 19 and 20 have been added to claim further aspects of the present invention, and are respectfully submitted as in condition for allowance.

In view of the above, Applicant respectfully submits that each of the presently pending claims in this application is in condition for allowance. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below. In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 393032044500. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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